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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR     | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/051,070      | 04/02/1998  | STEPHEN CLIFFORD APPLEBY | 36-1201             | 7570             |

23117 7590 10/27/2003

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EXAMINER

PHAN, THAI Q

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2123

DATE MAILED: 10/27/2003

28

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.  
**09/051,070**

Applicant(s)  
**Appleby, Stephen**

Examiner  
**Thai Phan**

Art Unit  
**2123**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Jul 28, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 20-30 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 20-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some\* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

### **DETAILED ACTION**

This Office Action is responsive to applicant's response filed July 28, 2003. Applicant's argument in the Brief for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Claims 1-16, and 20-30 are pending in this Office action

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1 and 2, the cited "so that the user can be trained to engage in transaction with another person" in the claims is unclear and indefinite for what its intention is.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bayya et al., US patent no. 5,774,860, in view of Russell et al., US patent no. 5,791,904.

As per claim 1, Bayya discloses method and interactive system for adaptively recognizing user's spoken dialogue with feature limitations substantially similar to the claimed invention (Abstract, Background Art, and col. 2, lines 38-67). According to Bayya, the method and system includes:

means for outputting message to a user (Figs. 1-3, col. 5, line 53 to col. 6, line 8, for example),

means for receiving input from the user (Figs. 1-3, cols. 5-6)

means for analyzing lexical structure (col. 5, lines 21-35, col. 5, line 53 to col. 6, line 8, for example), means for storing rules specifying grammatically allowable relationships of words input (Figs. 1-3, cols. 5-6, for example),

a computer including a central processor, Figs. 1-3, col. 3, lines 18-55, cols. 5-7 for processing user dialogue, for example, of the present patent which includes lexical rules or grammar to recognize and handle the occurrence of words or spoken language through the input devices (col. 5, lines 22-53), contained in the lexical rules the relationships specifying by rules in accordance with the data specified in the transaction, key word objects or non-keyword objects, word meaning, etc. in the database of the system, a transaction storage means for containing data relating to allowable transactions between users interaction (Figs. 1-4, col. 6, lines 20-33, line 51 to col. 7, line 5, for example) and independence upon recognition, to generate output dialogue in an adaptive manner with the most recent or current to meet real time requirement or time

duration relying on constraints applied to the training model (Figs. 1-3, cols. 5-7) for recognizing dialogue language (col. 6, lines 5 to col. 7, line 31),

and an output means for making output dialogue available for dialogue purpose (Figs. 1-3, cols. 5-6) for interactive dialogue with other person. Bayya does not expressly specify the interactive spoken dialogue can be used for training as claimed. Such feature is however well-known in the art. In fact, Russell teaches speech recognition system being used for training user in order to speak or pronounce correctly (Abstract, col. 2, lines 10-67, col. 10, lines 4-14, col. 13, lines 28-37, for example), and recognizing spoken language accuracy (col. 2, col. 10, lines 4-14, col. 13, lines 28-37, for example).

This would motivate practitioner in the art at the time of the invention was made to combine spoken training aide as taught by Russell into Bayya interactive spoken dialogue recognition method above in order to train and recognize trainee spoken language correctly and accurately for interactive voice dialogue training.

5. Claims 2-16 and 20-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayya et al., US patent no. 5,774,860, in views of Russell et al, US patent no. 5,791,904, and Linebarger et al., US patent no. 5,652,897.

As per claim 2, Bayya discloses method and interactive system for adaptively recognizing user's spoken dialogue with feature limitations substantially similar to the claimed invention (Abstract, Disclosure of the Invention, and col. 2, lines 38-67). According to Bayya, the method and system includes:

means for outputting message to a user (Figs. 1-3, col. 5, line 53 to col. 6, line 8, for example),

means for receiving input from the user (Figs. 1-3, cols. 5-6),

means for analyzing lexical structure (col. 5, lines 21-35, col. 5, line 53 to col. 6, line 8, for example), means for storing rules specifying grammatically allowable relationships of words input (Figs. 1-3, cols. 5-6, for example),

a central processor in a computer, Figs. 1-3, col. 3, lines 18-55, cols. 5-7, for processing user dialogue, for example, of the present patent which includes lexical rules or grammar to recognize and handle the occurrence of words or spoken language through the input devices (col. 5, lines 22-53), contained in the lexical rules the relationships specifying by rules in accordance with the data specified in the transaction, key word objects or non-keyword objects, word meaning, etc. in the database of the system, a transaction storage means for containing data relating to allowable transactions between users interaction (Figs. 1-4, col. 6, lines 20-33, line 51 to col. 7, line 5, for example) and independence upon recognition, to generate output dialogue in an adaptive manner with the most recent or current to meet real time requirement or time duration relying on constraints applied to the training model (Figs. 1-3, cols. 5-7) for recognizing dialogue language (col. 6, lines 5 to col. 7, line 31),

and an output means for making output dialogue available for dialogue purpose (Figs. 1-3, cols. 5-6) for interactive dialogue with other person and correctly recognizing user dialog for response (col. 2, lines 29-55). Bayya does not especially express the interactive spoken dialogue can be used for training, and constraint relaxed for speech recognition as claimed. Such training

feature for aiding user in dialogue is however known in the art. In fact, Russell teaches speech recognition system for training user in order to speak or pronounce correctly (Abstract, col. 2, lines 10-67, col. 10, lines 4-14, col. 13, lines 28-37, for example), and recognizing spoken language accuracy (col. 2, col. 10, lines 4-14, col. 13, lines 28-37, for example).

This would motivate practitioner in the art at the time of the invention was made to combine spoken training aide as taught by Russell into Bayya interactive spoken dialogue recognition method above in order to train and recognize trainee spoken language correctly and accurately for interactive voice dialogue.

For relaxing constraint limitation, such limitation is however well-known in the art. In fact, Linebarger teaches relaxing constraint requirement in speech recognition in order to robust processing spoken dialogue and to recognize and partially interpret errors efficiently (col. 9, line 61 to col. 10, line 64).

This would motivate practitioner in the art at the time of the invention was made to include the feature of constraint relaxation in speech recognition as discloses in Bayya in order to robust process and recognize spoken dialog user speech in an efficient and real time manner as taught in Linebarger.

As per claim 3, Bayya discloses lexical for dialogue or spoken language grammar which would include such as number, genders, etc.

As per claims 4-5, Bayya discloses dialogue recognition (cols. 5 and 6, for example) based on such as semantic grammar rules, syntactic structures, lexicons, etc. Which would include detect recognized errors as claimed

As per claim 6, Bayya discloses language training model for a target language.

As per claims 7-11, Bayya and Linebarger disclose the system for use to recognize text, speech, voice, other peripheral device inputs for user dialogue, etc.

As per claim 12, Bayya discloses interactively interface for user which include speech synthesizer as claimed for dialogue.

As per claims 13-15, Bayya discloses user dialogue interactive interface (Figs. 1 and 4, col. 5, line 53 to col. 6, line 50), including a computer, input means and user interface for interactive with speaking user . Linebarger teaches graphic user interface for natural language processing, for example.

As per claim 16, Bayya discloses communication channel in a recognition network connected dialogue server remotely such as in central telecommunication system (Abstract).

As per claim 20, Bayya and Linebarger disclose dialogue recognition includes rules to recognize characters, numbers, etc. as claimed.

As per claims 21-23, Bayya discloses lexical rules of syntax, grammars, etc. which would include inflection rules as claimed.

As per claim 24, Bayya discloses method and interactive system for adaptively recognizing user's spoken dialogue with feature limitations substantially similar to the claimed invention (Abstract, Disclosure of the Invention, and col. 2, lines 38-67). According to Bayya, the method and system includes:

means for outputting message to a user (Figs. 1-3, col. 5, line 53 to col. 6, line 8, for example),



means for receiving input from the user (Figs. 1-3, cols. 5-6),

means for analyzing lexical structure (col. 5, lines 21-35, col. 5, line 53 to col. 6, line 8, for example), means for storing rules specifying grammatically allowable relationships of words input (Figs. 1-3, cols. 5-6, for example),

a central processor in a computer, Figs. 1-3, col. 3, lines 18-38, and cols. 5-7, for processing user dialogue, for example, of the present patent which includes lexical rules or grammar to recognize and handle the occurrence of words or spoken language through the input devices (col. 5, lines 22-53), contained in the lexical rules the relationships specifying by rules in accordance with the data specified in the transaction, key word objects or non-keyword objects, word meaning, etc. in the database of the system, a transaction storage means for containing data relating to allowable transactions between users interaction (Figs. 1-4, col. 6, lines 20-33, line 51 to col. 7, line 5, for example) and independence upon recognition, to generate output dialogue in an adaptive manner with the most recent or current to meet real time requirement or time duration relying on constraints applied to the training model (Figs. 1-3, cols. 5-7) for recognizing dialogue language (col. 6, lines 5 to col. 7, line 31),

and an output means for making output dialogue available for dialogue purpose such as recognizing user request and response to such request (Figs. 1-3, col. 2, cols. 5-6, for example) for interactive dialogue with other person. Bayya does not especially express the interactive spoken dialogue can be used for training, and constraint relaxed for speech recognition as claimed. Such training feature for aiding user in dialogue is however known in the art. In fact, Russell teaches speech recognition system for training user in order to speak or pronounce

correctly (Abstract, col. 2, lines 10-67, col. 10, lines 4-14, col. 13, lines 28-37, for example), and recognizing spoken language accuracy (col. 2, col. 10, lines 4-14, col. 13, lines 28-37, for example).

This would motivate practitioner in the art at the time of the invention was made to combine spoken training aide as taught by Russell into Bayya interactive spoken dialogue recognition method above in order to train and recognize trainee spoken language correctly and accurately for interactive voice dialogue.

For relaxing constraint limitation, such limitation is however well-known in the art. In fact, Linebarger teaches relaxing constraint requirement in speech recognition in order to robust processing spoken dialogue and to recognize and partially interpret errors efficiently (col. 9, line 61 to col. 10, line 64).

This would motivate practitioner in the art at the time of the invention was made to include the feature of constraint relaxation in speech recognition as discloses in Bayya in order to robust process and recognize spoken dialog user speech in an efficient and real time manner as taught in Linebarger.

As per claim 25, both Bayya and Linebarger disclose dialog conversion rules including lexicon rules or constraint rules or relation, and Lee anticipates such rules or conversation constraints would be removed or relaxed to optimally train and effective process.

As per claims 26-27, Bayya requires hardware such as a digital signal processing processor as in the claims for performing such claimed limitations.

As per claims 28-29, Bayya discloses method and interactive system for adaptively recognizing user's spoken dialogue with feature limitations substantially similar to the claimed invention (Abstract, Disclosure of the Invention, and col. 2, lines 38-67). According to Bayya, the method and system includes:

means for outputting message to a user (Figs. 1-3, col. 5, line 53 to col. 6, line 8, for example),

means for receiving input from the user (Figs. 1-3, cols. 5-6),

means for analyzing lexical structure (col. 5, lines 21-35, col. 5, line 53 to col. 6, line 8, for example), means for storing rules specifying grammatically allowable relationships of words input (Figs. 1-3, cols. 5-6, for example),

a central processor Figs. 1-3, cols. 5-7 for processing user dialogue, for example, of the present patent which includes lexical rules or grammar to recognize and handle the occurrence of words or spoken language through the input devices (col. 5, lines 22-53), contained in the lexical rules the relationships specifying by rules in accordance with the data specified in the transaction, key word objects or non-keyword objects, word meaning, etc. in the database of the system, a transaction storage means for containing data relating to allowable transactions between users interaction (Figs. 1-4, col. 6, lines 20-33, line 51 to col. 7, line 5, for example) and independence upon recognition, to generate output dialogue in an adaptive manner with the most recent or current to meet real time requirement or time duration relying on constraints applied to the training model (Figs. 1-3, cols. 5-7) for recognizing dialogue language (col. 6, lines 5 to col. 7, line 31),

and an output means for making output dialogue available for dialogue purpose (Figs. 1-3, cols. 5-6) for interactive dialogue with other person. Bayya does not especially express the interactive spoken dialogue can be used for training, and constraint relaxed for speech recognition as claimed. Such training feature for aiding user in dialogue is however known in the art. In fact, Russell teaches speech recognition system for training user in order to speak or pronounce correctly (Abstract, col. 2, lines 10-67, col. 10, lines 4-14, col. 13, lines 28-37, for example), and recognizing spoken language accuracy (cols. 2, 10, and 13).

This would motivate practitioner in the art at the time of the invention was made to combine spoken training aide as taught by Russell into Bayya interactive spoken dialogue recognition method above in order to train and recognize trainee spoken language correctly and accurately for interactive voice dialogue.

For relaxing constraint limitation, such limitation is however well-known in the art. In fact, Linebarger teaches relaxing constraint requirement in speech recognition in order to robust processing spoken dialogue and to recognize and partially interpret errors efficiently (col. 9, line 61 to col. 10, line 64).

This would motivate practitioner in the art at the time of the invention was made to include the feature of constraint relaxation in speech recognition as discloses in Bayya in order to robust process and recognize spoken dialog user speech in an efficient and real time manner as taught in Linebarger.

As per claim 30, Linebarger teaches relaxing constraint requirement in speech recognition in order to robust processing spoken dialogue and to recognize and partially interpret errors efficiently (col. 9, line 61 to col. 10, line 64).

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-16, and 20-30 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Rothenberg, Martin, US patent no. 5,717,828, issued on Feb. 1998

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Phan whose telephone number is (703) 305-3812.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)305-3900.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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**or faxed to:**

(703) 872-9306, (for formal communications intended for entry),

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

October 19, 2003

*Mayphan*  
*Patent Examiner*  
*Thai Phan*  
*AU 2123*